

CLAIMS

What is claimed is:

1 1. An impedance network, comprising:
2 a plurality of impedance elements;
3 at least one end terminal;
4 a first plurality of switching elements selectively
5 providing tap positions to the at least one end terminal,
6 selectable at a first specified increment of impedance
7 elements in the plurality of impedance elements;
8 a wiper terminal; and
9 a second plurality of switching elements selectively
10 providing a tap positions to the wiper terminal, selectable
11 at a second specified increment of impedance elements in the
12 plurality of impedance elements.

1 2. The network of claim 1, wherein the first specified
2 increment is larger than the second specified increment, to
3 enable the first plurality of switching elements to provide
4 coarse adjustment, and to enable the second plurality of
5 switching elements to provide fine adjustment.

1 3. The network of claim 1, wherein the second
2 plurality of switching elements is disposed in the middle of
3 the impedance network to allow end-to-end resistance to
4 remain constant.

1 4. The network of claim 1, wherein the first specified
2 increment is four impedance elements.

1 5. The network of claim 1, wherein the second
2 specified increment is one impedance element.

1 6. The network of claim 1, wherein said first
2 plurality of switching elements includes a plurality of
3 transistors.

1 7. The network of claim 1, wherein said plurality of
2 transistors includes a plurality of field-effect transistors
3 (FET).

1 8. The network of claim 1, wherein said second
2 plurality of switching elements includes a plurality of
3 transistors.

1 9. The network of claim 1, further comprising:
2 a third plurality of switching elements selectively
3 providing tap positions to the wiper terminal, selectable at
4 a second specified increment of impedance elements in the
5 plurality of impedance elements to substantially reduce the
6 direct connection of the first plurality of switching
7 elements to the at least one terminal.

1 10. The network of claim 1, further comprising:
2 a third plurality of switching elements selectively
3 providing tap positions to the wiper terminal, selectable at
4 a third specified increment of impedance elements in the
5 plurality of impedance elements to substantially reduce the
6 direct connection of the first plurality of switching
7 elements to the at least one terminal.

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1 11. The network of claim 10, wherein the third
2 specified increment is smaller than the second increment.

1 12. A resistor network having a plurality of resistors,
2 comprising:
3 at least one end terminal;
4 a wiper terminal;
5 a first plurality of switching elements selectively
6 providing tap positions to the at least one end terminal,
7 selectable at a first specified increment of resistors in the
8 network; and
9 a second plurality of switching elements selectively
10 providing a tap positions to the wiper terminal, selectable
11 at a second specified increment of resistors in the network.

1 13. The network of claim 12, wherein said first set of
2 switching elements includes a plurality of transistors.

1 14. The network of claim 13, wherein said plurality of
2 transistors includes a plurality of field-effect transistors
3 (FET).

1 15. A method for configuring an impedance network,
2 comprising:
3 providing a plurality of impedance elements;
4 providing at least one end terminal and a wiper
5 terminal;
6 first selectively providing tap positions to the at
7 least one end terminal, selectable at a first specified
8 increment of impedance elements in the network; and
9 second selectively providing a tap positions to the
10 wiper terminal, selectable at a second specified increment of
11 impedance elements in the network.

1 16. The method of claim 15, wherein the first and
2 second selectively providing includes selecting the first
3 specified increment to be larger than the second specified
4 increment.

1 17. The method of claim 15, wherein the first
2 selectively providing includes providing coarse adjustment.

1 18. The method of claim 15, wherein the second
2 selectively providing includes providing fine adjustment.

1 19. The method of claim 15, further comprising:
2 third selectively providing tap positions to the wiper
3 terminal, selectable at a third specified increment to
4 protect the at least one end terminal.

1 20. A method for configuring an impedance network,
2 comprising:
3 selectively connecting a first plurality of resistors to
4 the two end terminals of a variable impedance network for
5 coarse adjustment;
6 selectively connecting a second plurality of resistors
7 to the wiper terminal for fine adjustment; and
8 configuring the first and second pluralities of
9 resistors to provide all increments of resistance values.